UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 14-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 14-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Part III   DETAILED ACTION

Specification

1.   A request for continued examination under 37 CFR 1.114,

including the fee set forth in 37 CFR 1.17(e), was filed in this

application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the

fee set forth in 37 CFR 1.17(e) has been timely paid, the

finality of the previous Office action has been withdrawn

pursuant to 37 CFR 1.114. Applicant's submission filed on

October 21, 2008 has been entered.

2.   Claims 1-12 and 14-19 are presented for examination. Claim

13 has been canceled.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs
of 35 U.S.C. § 102 that form the basis for the rejections under
this section made in this Office action:

A person shall be entitled to a patent unless --

    (e)   the invention was described in (1) an application for
    patent, published under section 122(b), by another filed in
    the United States before the invention by the applicant for
    patent or (2) a patent granted on an application for patent by
    another filed in the United States before the invention by the
    applicant for patent, except that an international application
    filed under the treaty defined in section 351(a) shall have

the effects for purposes of this subsection of an application
filed in the United States only if the international
application designated the United States and was published
under Article 21(2) of such treaty in the English language.

4.   Claim 1 is rejected under 35 U.S.C. § 102(e) as being

anticipated by Tullis (USPN: 6,535,243).

Regarding Claim 1, the claim recites "A data exchange and

storage device, comprising: a controller module including a

firmware used for controlling the operation of each of modules

in the data exchange and storage device and performing data

processing and information exchange;". Tullis teaches a hand-

held digital camera (i.e. data exchange and storage device) that

is able to wirelessly transfer data with a host computer. Fig. 2

shows the camera to have a processor (i.e. controller module)

that is used for controlling the memory and transceiver (i.e.

for controlling the operation of each of modules in the data

exchange and storage device) and perform data processing (Col.

4, Line 25) and information exchange (Col. 4, Lines 22-25).

Since the processor, which is hardware, is able to perform

processing on raw digital image data (Col. 4, Line 25), it is

then applying predetermined steps to an image, and qualifies as

firmware. Claim 1 further recites "an internal memory module

for storing data under the control of the controller module".

Tullis teaches the digital camera to have built-in memory (Col.

4, Line 42), which qualifies as an internal memory module for
storing data under control of the processor (i.e. controller
module). Claim 1 further recites "a system interface module
capable of being connected with a data processing system and
performing data exchange with the data processing system under
the control of the controller module; and". Fig. 2 teaches a
transceiver (i.e. system interface) with a transmitter and
receiver, the transceiver being wirelessly connected (Col. 5,
Line 23) to a host computer (i.e. data processing system) (Col.
5, Line 43). The transceiver transfers data to and from the host
computer (i.e. performs data exchange with the data processing
system) (Col. 5, Line 60). Claim 1 further recites "an external
storage equipment interface module being connected with an
external storage equipment and performing data exchange with the
external storage equipment under the control of the controller
module." Tullis further teaches that removable memory (i.e.
external storage equipment) can augment built-in memory (Col. 4,
Line 43). Col. 1, Line 40 teaches that removable memory can
include detachable memory cards, as taught by Sawanobori (US
6535243), whom Tullis incorporates by reference. Fig. 1 of
Sawanobori teaches an interface (Interface CCT) that connects
the memory card (i.e. external storage equipment) to the digital
camera. The interface allows data to be exchanged from the

camera to the memory card (Col. 3, Line 40 of Sawanobori). Then

Tullis teaches, through an incorporated reference, an interface

that qualifies as an external storage equipment interface

module. Since the processor of Fig. 1 is able to write to the

host computer (i.e. data processing system) and removable memory

(i.e. external storage equipment), both are under at least

partial control of the processor (i.e. controller module). The

further limitation of "wherein the controller module permits

data exchange and data access from the internal memory module to

the external storage equipment and from the external storage

equipment to the internal memory module when the data processing

system is not connected" is taught by Tullis since Tullis

clearly disclose that the digital camera can communicate with

the host computer through the wireless communication link (e.g.

see abstract, column 2, lines 45 et seq.). Tullis further

discloses an audio module and/or a video module for combining

with the internal memory module or external storage equipments

to implement a function of playing multi-media; for example,

Tullis teaches the digital camera to allow for a voice recording

to annotate images (Col. 8, Line 10) where a microphone and

speaker makes up an audio module for recording and outputting

the voice data (i.e. implement a function of playing multi-

media). Further note that the function of playing multi-media

constitutes intended use.

Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is
> not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject
> matter pertains. Patentability shall not be negatived by
> the manner in which the invention was made.

6.   Claims 1, 4-8, 10-12, and 15-19 are rejected under 35

U.S.C. 103(a) as being unpatentable over Battaglia (USPN

6,658,202 in view of Tullis (USPN: 6,535,243).

Regarding Claim 1, the claim recites "A data exchange and

storage device, comprising." a controller module including a

firmware used for controlling the operation of each of modules

in the data exchange and storage device and performing data

processing and information exchange;" Battaglia teaches a

portable data transfer and mass storage device (Fig. 1) (i.e.

data exchange and storage device) for transferring data from a

flash memory (i.e. external storage equipment) to a mass storage

device (i.e. internal memory module). The apparatus of Fig. 1

transfers data from the flash card of a digital camera to a mass

storage device in the apparatus, freeing the memory on the flash

card. The data on the mass storage device can then be downloaded

to a computer. Fig. 2 teaches a system controller logic and a

processor that together qualify as a controller module. The

processor has associated firmware (Col. 6, Line 1), and performs

data processing (Col. 5, Line 15). The system controller logic

controls the operations of the interfaces and internal memory

(i.e. modules) (Fig. 2) and performs information exchange (Col.

3, Line 45 and Col. 2, Line 25). Claim 1 further recites "an

internal memory module for storing data under the control of the

controller module;" Battaglia teaches a mass storage device

(i.e. internal memory module)(Fig. 1) for storing data under the

control of the system controller logic (i.e. controller module)

(Fig. 2). Claim 1 further recites "a system interface module

capable of being connected with a data processing system and

performing data exchange with the data processing system under

the control of the controller module; and". Fig. 1 teaches

serial/parallel ports (i.e. hardware system interface module),

which Fig. 2 shows to include a USB interface, FireWire

Interface, or Parallel Port Interface (i.e. software system

interface module). The interfaces are connected to a computer
(i.e. data processing system) (Col. 5, Line 34) and performs
downloading and uploading of data (i.e. data exchange) (i.e.
Col. 7, Line 25) with the computer. Since the computer receives
data through the system controller logic, it is under at least
partial control of the system controller logic (i.e. controller
module). The further limitation of "wherein the controller
module permits data exchange and data access from the internal
memory module to the external storage equipment and from the
external storage equipment to the internal memory module when
the data processing system is not connected" is taught by
Battaglia since Battaglia disclose that the data can be
transferred/download thru a wide range of ports including
firewire (including wireless) as being disclosed (e.g. see
column 3, lines 46 et seq.). Claim 1 further recites "an
external storage equipment interface module being connected with
an external storage equipment and performing data exchange with
the external storage equipment under the control of the
controller module." Fig. 1 teaches a first flash memory input
port and a second memory input port (i.e. external storage
equipment interface module) for performing data exchange with a
memory module removed from a digital camera (i.e. external
storage equipment). Since the memory module transfers data

through the system controller logic, it is under at least

partial control of the system controller logic (i.e. controller

module); Figure 2 of Battaglia further teaches the second memory

input port can have a PCMCIA interface (Col. 4, Line 17).

Battaglia discloses the invention as claimed, detailed

above with respect to claim 1. Battaglia, however does not

particularly teach an audio module and/or a a video module for

combining with the internal memory module or external storage

equipments to implement a function of playing multi-media.

Tullis discloses the missing element that is known to be

required in the system of Battagli in order to arrive at

Applicant's current invention wherein Tullis teaches the digital

camera to allow for a voice recording to annotate images where a

microphone and speaker makes up an audio module for recording

and outputting the voice data (i.e. implement a function of

playing multi-media), the function of playing multi-media

constitutes intended use (e.g. see Col. 8, lines 10 et seq.).

Accordingly, it would have been obvious to one having ordinary

skill in the art at the time the current invention was made to

implement the audio module as taught by Tullis for that of

Battaglia invention in order to arrive at Applicant's current

invention. In doing so, it would allow the system of Battaglia

to provide audio interface to users which results to allowing

the system of Battaglia to serve broader range of application, thereby broadening one's potential market and saving investment capital.

Regarding Claim 4, the claim recites "wherein the system interface module includes USB interface, IEEE 1394 interface, Bluetooth interface, IrDA infrared interface, HomeRF interface, IEEE802.11a interface, IEEE802.11b, IEEE802.11g, SCSI, RS232 and printer parallel port, wired wide area local area interface and/or wireless wide area local area interface." Battaglia teaches the serial/parallel port (i.e. system interface) that connects the storage device of Fig. 1 to a computer system includes a USB and FireWire (i.e. IEEE 1394) interface (Col. 3, Line 47).

Regarding Claim 5, the claim recites "wherein the external storage equipment interface module (64) includes SM,, CF, MMC, SD, MS, MD or x-D interface". Battaglia teaches the flash memory of the digital cameras (i.e. external storage equipment) to include SmartMedia, Compact Flash, MMC media, or Sony memory Stick (Col. 4, Line 5 and Col. 2, Line 53). Then the flash memory input port of Fig. 1 qualifies as an external storage equipment interface module including one of the interfaces above.

   Regarding Claim 6, the claim recites "wherein the system interface module and the external storage equipment interface module either includes single interface or a group of interfaces of the same type or different type of interfaces ". Battaglia teaches the interface to the computer system (i.e. system interface) to include a USB, FireWire, and Parallel Port Interface (i.e. group of interfaces), that are either the same or different.

   Regarding Claim 7, the claim recites "a power source module for supplying power to the data exchange and storage device from the data processing system through an external power source or a self-supplied battery or the system interface module ". Battaglia teaches a power supply in Fig. 2.

   Regarding Claim 8, the claim recites "a manual control module for performing the manual control of data capture and transmission, information prompt, and operational mode switching." Fig. 2 teaches keyboards and buttons (i.e. manual control module) to allow a user to manually initiate download of information onto the mass storage device (Col. 2, Line 66). The keys create a user interface to allow a user to select between downloading data or reformatting the flash memory, the two operations being two operational modes. Col. 3, Line 17 further teaches a LCD display that qualifies as an information prompt,

since it allows a user to preview an image before deleting or keeping it. That is, the LCD prompts the user with an image and lets the user decide whether or not to save the image.

Regarding Claim 10, the claim recites "an information prompt module for displaying static information and dynamic information". Battaglia teaches a LED and LCD display (i.e. information prompt module) that allows the user to decide (i.e. prompts the user) whether to save the image (Col. 3, Line 17). The LED and LCD further display information to the user, with dynamic information such as copy completion status, download-in-progress status (Col. 3, Line 32), or data integrity status and standard-conforming status (Col. 6, Lines 25-30).

Regarding Claim 11, the claim recites "wherein the information includes user information, product information, device information, transmission file information, operational state information and the information of external storage equipments which are connected therewith." Battaglia teaches transmission file information and operational state information (Col. 6, Line 18 and Col. 3, Line 26), information of external storage equipments (Col. 6, Line 24) through the LED and LCD display. Information showing the integrity of a flash module (Col. 6, Line 30) qualifies as device and product information. The LCD and LED would further be able to display user

information, as the exact kind of information displayed does not affect the structure of the LCD or LED or information prompt module, and constitutes intended use.

Regarding Claim 12, the claim recites "the information prompt module includes at least one of a liquid crystal display, a light emitting diode, a LED, a sound device and a vibrator. " Battaglia teaches a LED and LCD display (Col. 3, Line 25).

Regarding Claim 15, the claim recites "wherein the external storage equipment is a removable disk or a storage card." Battaglia teaches the external storage equipment to be a flash card that is removable (Col. 2, Line 59).

Regarding Claim 16, the claim recites "1) the controller module of the data exchange and storage device detecting the characteristic information of the external storage equipments connected with the relevant interfaces of the external storage equipment interface module, selecting the relevant interface protocols according to the characteristics information of the external storage equipments, and establishing connections with the external storage equipments;" Battaglia teaches detecting the data integrity of a memory module whose data is to be downloaded to the mass storage device (Col. 6, Line 21). Col. 6, Line 25 further teaches checking whether the memory module conforms to a standard format supported by the device. The

integrity and the format of the data on the module qualify as
characteristic information of the external storage equipment
connected with the relevant interfaces of the external storage
equipment interface module. Since the firmware checks for the
appropriate standard format (i.e. interface), it is inherent
that the relevant transfer format (i.e. interface protocol)
according to the format of the memory module is selected. 2)the
controller module controlling the data exchange between the data
exchange and storage device and the external storage equipment
or the data processing system, and controlling the access to the
internal memory module and the external storage equipment
according to the requests from the data processing system or
users." Battaglia teaches in Fig. 2 for the system controller
logic (i.e. controller module) to control data exchange between
the portable data transfer and mass storage device (title of
Battaglia's invention) and a flash memory module (i.e. external
storage equipment), where it controls access to the mass storage
device (i.e. internal memory module) and flash memory cards
according to requests from users (Col. 4, Line 65) or computer
system (Col. 6, Line 13).

Regarding Claim 17, the claim recites "the controller
module displaying the data read from the external storage
equipment or the internal memory module on the display part of

the information prompt module according to the operational

instructions of the data processing system and the users; and/or

outputting the user information, the operational state

information of the data exchange and storage device, the

relevant information of the external storage equipment through

the information prompt module". Battaglia teaches displaying

the image (i.e. data) read from the flash cards (i.e. external

storage equipment) on the LCD display (i.e. display part of the

information prompt module) (Col. 3, Line 18) according to the

operational instructions of the data processing system and user

(Col. 3, Line 20). Battaglia further teaches outputting status

of the copying (i.e. operational state information of the data

exchange and storage device) (Col. 3, Line 25) and relevant

information of the flash memory module (Col. 6, Line 29) through

the LCD and LED (i.e. information prompt module).

Regarding Claim 18, the claim recites "playing the multi-

media data read from the external storage equipment or the

internal memory module through the audio module and/or video

module according to the operational instructions of the data

processing system and the users." Battaglia teaches the data

transfer device of Fig. 1 to reproduce music (i.e. play multi\-

media data read from the flash memory storage through an audio

module) (Col. 2, Line 45).

Regarding Claim 19, the claim recites "the manual control
module transmitting the operational instructions, such as,
storing user data, prompting information, switching operational
modes, etc., to the controller module." Battaglia teaches user
interface keys (i.e. manual control module) for allowing a user
to initiate copying of data from a flash memory module or to
reformat a memory module (i.e. transmitting operational
instructions such as switching operational modes) (Col. 3, Line
3).

7.   Claims 2-3 are rejected under 35 U.S.C. § 103(a) as being
unpatentable over Battaglia (USPN: 6,658,202) in view of Tullis
(USPN: 6,535,243) and further in view of Su (USPN: 6,789,164).

     Regarding Claims 2 and 3; the combination of Battaglia and
Tullis discloses the invention as claimed, detailed above with
respect to claim 1. Claim 2 further recites "wherein the
internal memory module includes a hard disk, a removable hard
disk, a semiconductor storage, and an optical medium storage
driving device." Noting that the claim recites for a hard disk,
semiconductor storage, and an optical medium storage to all be
present. Claim 3 further recites that "the semiconductor
storage is selected from one of Flash Memory, DRAM, EEPROM,

SRAM, FRAM, MRAM and Millipede, and adopts one or more

semiconductor chips." Battaglia teaches the mass storage device

(i.e. internal memory module) (Col. 3, Line 53) can include a

hard drive that is fixed or removable (i.e. a hard disk or a

removable hard disk), and can further include a high capacity

flash memory module or battery backed SRAM (i.e. semiconductor

storage selected from one of Flash Memory and SRAM). However,

Battaglia and Tullis do not explicitly teach the mass storage

device to further include an optical medium storage. Su teaches

an apparatus for directly transferring data from a compact flash

memory to an optic disk, without an intervening computer system

(Col. 1, Line 29). Then combining Battaglia, Tullis and Su would

naturally incorporate the optic disk as part of a mass storage

device. It would have been obvious to a person of ordinary

skill in the art at the time of the invention to modify

Battaglia and Tullis's mass storage device with Su's optical

disk writing. Su provides the reference in Col. 1, Line 16,

where such storage is space-efficient, therefore being

advantageous.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being

unpatentable over Battaglia (USPN: 6,658,202) in view of Tullis

(USPN: 6,535,243) and further in view of Mansfield (US 5014192).

Regarding Claim 9, the combination of Battaglia and Tullis discloses the invention as claimed, detailed above with respect to claim 1. Noting that Battaglia teaches the user interface to contain keys (Col. 3, Line 13). Battaglia and Tullis however do not explicitly teach a dial switch. Mansfield teaches a dial switch (Col. 12, Line 14) for locating a file in a mass storage device (Abstract). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Battaglia and Tullis's user interface with a dial switch. Battaglia provides the reference, where the LCD display is meant to allow users to see images stored on the mass storage device. Then a dial switch can allow a user to see all the images of a mass storage device by incrementing through the images, in the same manner as Su teaches incrementing through the files using a dial switch; therefore being advantageous.

9.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Battaglia (USPN: 6,658,202) in view of Tullis (USPN: 6,535,243) and further in view of Viswanadham (USPN: 6,208,044).

Regarding Claim 14, the combination of Battaglia and Tullis discloses the invention as claimed, detailed above with respect to claim 1; the claim further recites "an eject device arranged

at the interface of the external storage equipment interface

module, the eject device may eject the external storage

equipment after being pressed." Noting that Battaglia teaches a

data transfer device, into which a removable memory module can

be inserted and removed. However, Battaglia and Tullis do not

explicitly teach an eject device and pressing an eject device.

Viswanadham teaches an ejection system for a mass storage

system, where the ejected medium is a PCMCIA card (Abstract).

Viswanadham further teaches an eject button to be pressed for

ejecting the card (Col. 3, Line 59). Fig. 1 shows the button to

be at the interface of the input port (i.e. external storage

equipment interface module). Combining this with Battaglia and

Tullis's invention second input port would provide for an input

PCMCIA slot that can eject PCMCIA cards through an eject button.

It would have been obvious to a person of ordinary skill in the

art at the time of the invention to modify Battaglia and

Tullis's mass storage device with Viswanadham's eject device.

Viswanadham provides the motivation in Col. 2, Line 20, where

manual ejection through a button would obviate the need for a

solenoid or motor involved in automatic ejection of PCMCIA

cards, therefore being advantageous.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Thai whose telephone number is (571)-272-4187. The examiner can normally be reached on from 6:30 A.M. to 4:00 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on (571)-272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see *http://pair-direct.uspto.gov*. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).
TVT/November 01, 2008

/Tuan V. Thai/

Primary Examiner, Art Unit 2186